STAROSTENKO, N.T.; DROBINSKIY, I.R.; ZAKHAROVA, T.A.; KOROVINA, T.V.

Comparative clinical characteristics of A and B type infectious hepatitis (Botkin's disease). Trudy Kish.gos.med.inst. 1:9-20 '60. (MIRA 16:2)

1. Kafedry fakul'tetskoy terapii, gospital'noy terapii i infektsionnykh bolezney Kishinevskogo gosudarstvennogo meditsinskogo instituta.

(HEPATITIS, INFECTIOUS)

VORONIN, A.V., kand. tekhn. nauk, otv. red.; ZAKHAROVA, T.A., red.

[Technical and economic problems of developing transportation; transactions of the conference of young specialists] Tekhniko-ekonomicheskie voprosy razvitiia transporta; trudy konferentsii molodykh spetsialistov. Moskva, In-t kompleksnykh transportnykh problem. No.6. 1964. 195 p. (MIRA 18:4)

ZAKHAROVA, T.A., dotsent; TROSHENKO, L.S., vrach

Occupational pathology in the production and use of polyvinyl chloride plastics. Trudy KGMI no.10:27-30 '63. (MIRA 18:1)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. kafedroy dotsent A.N.Kushnev), Kalininskogo gosudarstvennogo meditsinskogo instituta.

YERMOLAYEV, P.S., kand.tekhn.nauk; ZAKHAROVA, T.A., inzh.

Creation of multiple-chamber hydraulic sizers for fractionation of sand. Stroi. i dor. mash. 8 no.5:22-25 My '63. (MIRA 16:5)
(Sieves)

MEL'NIKOV, B.N.; KRASNOVITSKIY, B.M.; MORYGANOV, P.V.; ZAKHAROVA, T.D.

Relation between the structure of azo dyes (oxa- and thiodiazol derivatives) and the rate of their diffusion in copper rayon fibers. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.6:120-124 '60. (MIRA 14:1)

1. Ivanovskiy khimiko-tekhnologicheskiy institut i Khar'kovskiy gosudarstvennyy universitet imeni A.M. Gor'kogo.
(Dyes and dyeing--Rayon) (Azo dyes)

SHCHEGOLEVA, R.M., kand.tekhn.nauk, nauchnyy sotrudnik; ZAKHAROVA, T.D., inzh., nauchnyy sotrudnik

Effect of light weather on fabrics manufactured from a cotton and lavsan blend. Tekst.prom. 22 no.10:61-64 O '62. (MIRA 15:11)

1. Ivanovskiy nauchno-issledovatel'skiy institut tekstil'noy promyshlennosti (IvNITI).
(Textile fabrics—Testing)
(Dyes and dyeing—Textile fibers)

ZAKHAROVA, T.D., inzh., nauchnyy sotrudnik; SHCHEGOLEVA, R.M., kand. tekhn. nauk, nauchnyy sotrudnik

Single-bath process for dyeing and finishing cotton fabrics. Tekst. prom. 24 no.4:54-56 Ap '64. (MIRA 17:6)

1. Ivanovskiy nauchno-issledovatel'skiy tekstil'nyy institut (IvNITI).

ZAKHAROVA, T.D.; MORYGANOV, P.V.

Combining the dyeing of fabrics with active dyes with their finishing with thermosetting resins. Izv. vys. uchab. zav.; tekh. tekst. prom. no.1:111-116 '65. (MIRA 18:5)

1. Ivanovskiy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti khimiko-tekhnologicheskiy insti ut.

ZAKHAROVA, T.D.; MORYGANOV, P.V.

Studying the efficiency of the action of various precondensates in the combined dyeing and finishing process. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.4:103-111 '65. (MIRA 18:9)

1. Ivanovskiy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti i Ivanovskiy khimiko-tekhnologicheskiy institut.

ZAKHAROVA, T.; CHUMAKOV, A.

Review of the diseases of industrial crops. Zashch. rast. ot vred. i bol. 10 no.5:44-45 '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy.

LAPTEV, Yu.P., starshiy nauchnyy storudnik; ASSAUL, B.D.; KOVALEV, N.V., kand. sel'skokhoz. nauk; ZAKHAROVA, T.I., mladshiy nauchnyy sotrudnik; MAMAYEVA, Kh.P.; DUBINEVICH, B.N., starshiy nauchnyy sotrudnik

Brief information. Zashch. rast. ot vred. i bol. 9 no.9:54-56 '64. (MIRA 17:11)

1. Zaveduyushchiy laboratoriyey fitopatologii Vinnitskoy oblasti (for Assaul). 2. Maykopskaya opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta rasteniyevodstva (for Kovalev). 3. Vsesoyuznyy institut zashchity rasteniy (for Zakharova). 4. Moskovskiy pedagogicheskiy institut imeni V.I. Lenina (for Mamayeva). 5. Mironovskaya selektsionnaya stantsiya (for Dubinevich).

ZAKHAROVA, T. I., Cand of Med Sci (diss) "The Dynamics of Albumin Components of the Blood During Organic Diseases of the Stomach," Alma-Ata, 1959, 15 pp (Kazakh State Medical Institute) (KL, 7-60, 110)

ZAKHAROVA, T.K.; LYUBIMOV, I.M., red.; KONOVALYUK, I.K., mladshiy red.; KOSHELEVA, S.M., tekhn.red.

[White Russian S.S.R.] Belorusskaia SSR. Moskva, Gos. izd-vo geogr.lit-ry, 1959. 118 p. (MIRA 12:6)
(White Russia)

DOBRONRAVOVA, A.D.; TUGARINOV, D.N.; ZAKHAROVA, T.K.; KONOVALYUK, G.A., redaktor; MOGIMA, N.I., tekhnicheskiy redaktor

[Ukrainian S.S.R., White Russian S.S.R. and Moldavian S.S.R.] Ukrainskaia SSR, Belorusskaia SSR, Moldavskaia SSR. Moskva, Gos. izd-vo geogr. lit-ry, 1956. 69 p. (MLRA 10:3)
(Ukraine--Geography) (White Russia--Geography)
(Moldavia--Geography)

ZAMLIN, I.M.; AL'BITSKAYA, K.A.; TUGARINOV, D.N.; ZAKHAROVA, T.K.; KONOVALYUK, G.A., redaktor; GLEYKH, D.A., tekhnicheskiy redaktor

[Kazakhstan, Uzbekistan, Kirgizistan, Tajikistan, Turkmenistan] Kazakhskaia SSR, Uzbekskaia SSR, Kirgizskaia SSR, Tadzhikskaia SSR, Turkmenskaia SSR. Moskva, Gos. izd-vo geogr. lit-ry, 1956. 110 p. (MLRA 10:1)
(Soviet Central Asia--Economic conditons)

ZAKHAROVA, T.K.; TUGARINOV, Dmitriy Nikolayevich,; RODOMAN, B.B., red.;
NOGINA, N.I., tekhn. red.

[Tajik S.S.R.] Tadzhikskaia SSR. Moskva, Gos. izd-vo geogr. lit-ry, 1958. 63 p. (MIRA 11:12)
(Tajikistan)

ZAKHAROVA, T.K.

[Moldavian SSR; a brief account of its natural resources, population, and economy] Moldavskaia SSR; kratkie svedeniia o prirode, naselenii i khoziaistve. Moskva, Geografgiz, 1959. 71 p. (MIRA 13:2)
(Moldavia)

ZAKHAROVA, T.I.

Realization of the algorythm in the construction of the connection between geological and geophysical elements on an electronic digital computer. Geol. i geofiz. no.5:103-108 '65. (MIRA 18:8)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

L 1855-66
ACCESSION NR: AR5008456

UR/0271/65/000/002/B051/B051
681.142:001.55

39
B

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika. Svodnyy tom, Abs. 2B284

AUTHOR: Zakharova, T. L.

TITLE: Programs for selecting optimal form of connection and for joint analysis of gravitational and magnetic anomalies on digital computers

CITED SOURCE: Sb. Issled. statist. i funktsional'n. lineyn. svyazey v gravirazvedke i magnitorazvedke. Novosibirsk, 1963, 108-120

TOPIC TAGS: digital computer, gravitational anomaly, magnetic anomaly

TRANSLATION: In the course of interpretation of geophysical and geological data, a necessity arises for clarifying the nature of connection between two geological or geophysical quantities influenced by several factors, i.e., $f(x_1, x_2, \ldots, x_n, y_1, y_2)$ $\varphi = \varphi(x_1, x_2, \ldots, x_n, z_1, z_2, \ldots, z_n)$, where for the functions f and φ, the factors x_i are common while the factors y_i --

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ACCESSION NR: AR5008456

and z_i acting only upon one function are specific. With this connection, a number of values of the function f correspond to each value of φ. Having distribution series of the function f available, a line of regression can be drawn which shows how, on the average, one function varies with the variation of another. Analytically, the regression equations can be expressed as parabolic, hyperbolic, logistic, or exponential connection. Finding the form of connection between the distributions of two random quantities includes a reasonable selection of a theoretical regression line (type of equation) and calculation of optimal numerical parameters that enter the selected equation. A program is described for selecting optimal form of connection and for calculating optimal numerical parameters of the regression equations on a digital computer. The program comprises a number of blocks according to a translated algorithm of solution. Preparation of materials for computing includes approximate correlation-field determination of the degree of polynomial for the first regression equation and determination of the maximum number of function values which can be placed into the computer internal storage. As a practical example, the results are reported of an analysis of variation of density of the sedimentary rock of Mesocenozoic

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L 1855-66
ACCESSION NR: AR5008456

West-Siberian slab with the depth of bed. Also, algorithms are described of a joint analysis of gravitational and magnetic anomalies which are intended for solving the problems of field division in platform regions and intermountain areas and a program for supplying this algorithm to the digital computer. A scheme of operational programing is given. Bibl. 2, figs. 2.

ENCL: 00

SUB CODE: DP, ES

Card 3/3

PINEGINA, N. L.; MARCHENKO, V. I.; ZAKHAROVA, T. N.

Characteristics of the clinical course of chronic tonsillitis in connection with adenovirus and streptococcal infections. Vest. otorin. no.3:27-30 '62. (MIRA 15:6)

(ADENOVIRUS INFECTIONS) (STREPTOCOCCAL INFECTIONS)
(TONSILS--DISEASES)

ZAKHAROVA, T.P.; SIZOVA, R.N.

Methods of determining the long-period static fracture of heat resistant alloys in relation to their cracking. Zav.lab. 28 no.11:1356-1361 '62. (MIRA 15:11)
(Heat resistant alloys--Testing)

Country : USSR
Category : Farm Animals.
Cattle.
Abs. Jour : Ref Zhur-Biol., No 21, 1958, 96866

Author : Guzhova, T. P.; Zakharova, T. P.; Kolpakova,*
Institut. : Moscow Technological Institute of Meat and**
Title : The Feeding of Calves with the View of Their Future Economic Utilization.

Orig Pub. : Sb. stud. rabot. Mosk. tekhnol. in-t myasn. i molochn. prom-sti, 1958, vyp. 5, 112-114

Abstract : As young stock, 18-24 months old, was kept basically on coarse fodder and silage during the stall period and subsequently fattened on pasture without additional feeding with concentrates, it reached a live weight of 520-530 kg. The carcass yield of young stock, 28 months old, amounted to 52 percent.

Card: 1/1

*T. P.; Molchanova, T. K.
**Dairy Industries

ZAKHAROVA, Tat'yana Konstantinovna; KUZ'MINA, N.Ye., red.; GLEYKH, [redacted]

[The Moldavian S.S.R.] Moldavskaia SSR. Moskva, Gos.izd-vo geogr.lit-ry, 1959. 71 p. (MIRA 12:12)
(Moldavia)

ZAKHAROVA, T.N.; PAVLOVICHEVA, N.V.

Morphological changes in the tubular bones in rats in relation to the composition of their food ration in experimental prophylaxis and treatment of rickets. Trudy mol. nauch. sotr. MONIKI no.1:110-119 '59 (MIRA 16:11)

1. Iz pediatricheskoy kliniki (zav. prof. M.I.Olevskiy) i patomorfologicheskogo otdela (zav. prof. S.B.Vaynberg) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni Vladimirskogo.

*

S/137/60/000/012/030/041
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 12, p. 207,
29705

AUTHOR: Zakharova, T.P.

TITLE: Fatigue and Endurance Strength of Turbine Blade Alloys Under Conditions of Joint Effect of Static and Alternating Stresses

PERIODICAL: V sb.: Vopr. prochnosti materialov i konstruktsiy, Moscow, AN SSSR, 1959, pp. 123 - 143

TEXT: The author studied fatigue and endurance strength of preliminary heat-treated ЭИ-437А (EI-437A), ЭИ-617 (EI-617) and ЭИ-598 (EI-598) alloys at 700-900°C, intended for turbine blades when operating under the simultaneous effect of static tension and alternating tension-compression. The tests were made on a (600 t) pulsator; control tests of endurance strength were performed on the same machine. During fatigue tests by tension-compression, the static tension stress was maintained constant to obtain fatigue curves; the tests were based on 20-50 million cycles. It is shown that the basic factors affecting the fatigue resistance

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S/137/60/000/012/030/041
A006/A001

Fatigue and Endurance Strength of Turbine Blade Alloys Under Conditions of Joint Effect of Static and Alternating Stresses

are: the magnitude of maximum stresses of the cycle, the magnitude of static stress, temperature and time of tests. It was established that at a simultaneous effect of alternating and static stresses the nature of failure is determined by the level of static stress and the amplitude of alternating stress. Fatigue failure at the temperatures investigated occurs in the grains of the aforementioned alloys, breakdown from extended static load takes place along the grain boundaries. Transition from fatigue failure to extended static breakdown is determined by the exhaustion of service time resources of static stress. It is shown that permissible static stress, when alternating stresses are applied to the alloy, is determined from the endurance strength curve; the effect of alternating stresses is taken into account. There are 16 references.

Z. F.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/032/62/028/011/009/015
B104/B102

AUTHORS: Zakharova, T. P., and Sizova, R. N.

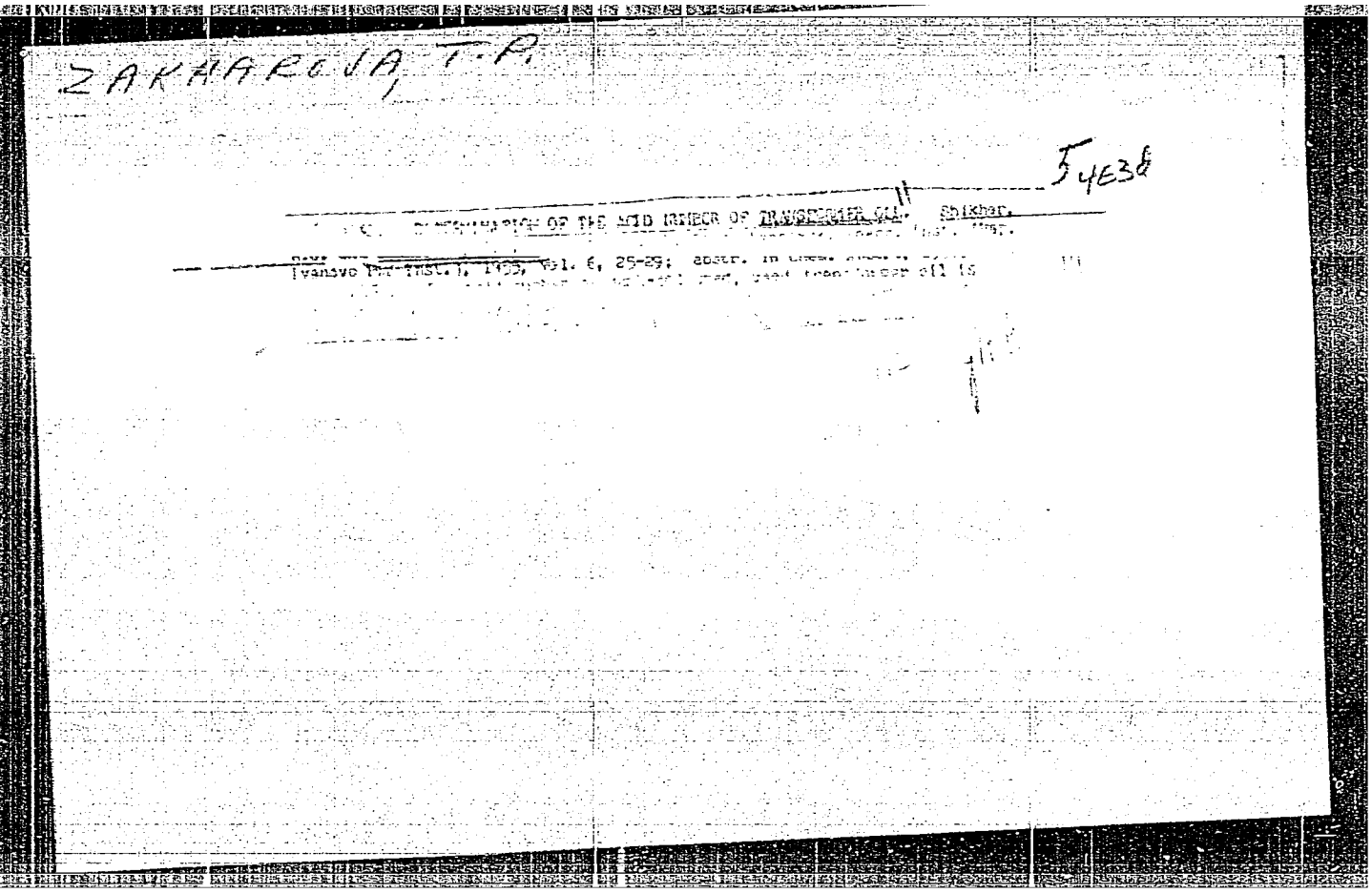
TITLE: Method of determining long-period static defects of heat-resisting alloys in relationto their cracking

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 11, 1962, 1356 - 1361

TEXT: The tensile strength, the long-period tensile strength, and the fatigue strength of ЭИ437А (EI437A) alloy specimens were determined after thermal treatment according to ТУ (TU), both with and without previous cold hardening (stretching to 5 or 15%). The fractured surfaces of the tensile-test specimens were examined for cracks by using a binocular microscope, in addition to which some of them were metallographically polished. Cracking were made evident by a widening of grain boundaries. Boundaries 0.05 - 0.1 mm wide were considered as cracks. On non-plated specimens such cracks appeared at 700°C and τ_H/T_H = 0.2 - 0.3; at 800°C, they appeared at τ_H/T_H = 0.3 - 0.4; in the case of plated specimens at τ_H/T_H=0.2. τ_H is the time during which the specimens were kept at a certain tempera-

Card 1/2

ture and stress, T_H is the time until fracture. Thus cracking already begins in the early stages of the static experiment. It coincides with the beginning of the second stage of creeping and with the appearance of the first surface cracks. The results of tensile tests cannot be regarded as comparative criteria for the quality of the initial material and of a pretreated (cold hardened) material, since the relative variations of σ_B (yield strength) and S_k (tensile strength) of specimens with or without cold hardening are equallized by the action of long-time static loads. The long-period tensile strength was determined on ЭИ617 (EI617) and ЭИ437Б (EI437B), besides EI437A, alloy specimens. The results show that material defects can be slowed down by suitable predeformation. Further, it is concluded that the behavior of structural members under static or dynamic loads can be determined only by experiments that imitate practical conditions. There are 4 figures and 1 table.



SHVETSOVA-SHILOVSKAYA, K.D.; MEL'NIKOV, N.N.; MAKSIMOVA, Z.I.; ZAKHAROVA, T.S.; BOCHAROVA, L.P.

Organic insectifungicides. Part 66: Synthesis and insecticide properties of esters of certain carbamic acids. Zhur.ob.khim. 32 no.10:3230-3232 O '62. (MIRA 15:11)

1. Nauchnyy institut po udobreniyam i insektofungitsidam imeni Ya.V. Samoylova.
(Carbamic acid) (Insecticides)

MEL'NIKOV, N.N.; SHVETSOVA-SHILOVSKAYA, K.D.; ZAKHAROVA, T.S.

Herbicides and plant growth controlling agents. Part 37: Synthesis of some urea derivatives. Zhur.ob.khim. 32 no.2: 381-383 F '62. (MIRA 15:2)

1. Nauchnyy institut po udobreniyam i insektofungitsidam imeni Ya.V. Samoylova.

(Urea)
(Growth promoting substances)

ZAKHAROVA, V., inzhener.

Using a steam heating apparatus for drying bricks. Stroi. met., iadel. i konstr. 2 no.2:26-27 F '56. (MLRA 9:6)
(Brickmaking machinery) (Drying apparatus)

ZAKHAROVA, V.A., kand.med.nauk; GERSHKARON, S.I., ordinator

Problem of disorders of development of female genitalia. Akush.i gin. 35 no.5:80-81 S-O '59. (MIRA 13:2)

1. Iz 1-y akusherako-ginekologicheskoy kliniki Tashkentskogo gosudarstvennogo meditsinskogo instituta (zaveduyushchiy - zasluzhennyy deyatel' nauki UzSSR prof. A.A. Kogan).
(GENITALIA, FEMALE, abnorm.)

ZAKHAROVA, V.A.

Dynamic studies on pregnandiol in urine as a method of control of the treatment of spontaneous abortion. Akush. gin. no.3:26-29 May-June 1953. (CLML 25:1)

1. Of the First Obstetric-Gynecological Clinic (Head -- Honored Worker in Science Prof. A. A. Kogan), Tashkent Medical Institute.

POPEREKA, M.Ya.; AVRAMENKO, O.I.; ZAKHAROVA, V.A.

Electrocrystallization stresses in bismuth deposits. Zhur. fiz. khim. 37 no.5:1165-1167 My '63. (MIRA 17:1)

1. Krasnoyarskiy politekhnicheskiy institut.

ZAKHAROVA, V.A., kand.med.nauk

Dynamic investigation of the pregnandiol content of urine as a control method in combined medical therapy in threatened abortion [with summary in English]. Akush. i gin. 34 no.1:53-57 Ja-F '58. (MIRA 11:4)

1. Iz 1-y akushersko-ginekologicheskoy kliniki (zav. kafedroy - zasluzhennyy deyatel' nauki UzbSSR prof. A.A.Kogan) Tashkentskogo meditsinskogo instituta.

(ABORTION, urine in pregnandiol, in threatened abortion, value in control of med. ther. (Rus))
(PREGNANDIOL, in urine in thereatened abortion, value in control of med. ther. (Rus))

POPEREKA, M.Ya.; VTYURIN, N.I.; ZAKHAROVA, V.A.; AVRAMENKO, O.I.; SAFONOV, I.A.

Internal stresses in galvanizing coatings. Zhur. fiz. khim. 39 no.2:527-530 F '65. (MIRA 18:4)

1. Krasnoyarskiy politekhnicheskiy institut.

GALKINA, N.V.; ABDULLAYEV, D.A.; ZAKHAROVA, V.A.

Biological characteristics and feed value of smaller duckweed.
Uzb. biol. zhur. 9 no.3:44-47 '65. (MIRA 18:8)

1. Institut botaniki AN UzSSR.

ZAKHAROVA, V.B., inzh.

Modernized milking unit "Elochka." Mashinostroenie no.3:99-101 My-Je '63. (MIRA 16:7)

1. Gosudarstvennoye seriyno-konstruktorskoye byuro po sel'skokhozyaystvennym mashinam Kiyevskogo soveta narodnogo khozyaystva. (Milking machines)

SHAKHOVA, Z.F.; GAVRILOVA, S.A.; ZAKHAROVA, V.F.

Analysis of molybdenum heteropoly compounds of selenium (IV).
Vest. Mosk. un. Ser. 2: Khim. 20 no.6:79-81 N-D '65.
(MIRA 19:1)

1. Kafedra analiticheskoy khimii Moskovskogo universiteta.
Submitted Feb. 26, 1965.

ZAKHAROVA, V.K.

Effect of penicillin on the content of nucleic acids in organs in experimental streptococcal infections. Antibiotiki 9 no.7:646-648 Jl '64. (MIRA 18:3)

1. Kafedra biokhimii Karagandinskogo meditsinskogo instituta.

SHAKHOVA, Z.F.; GAVRILOVA, S.A.; ZAHKAROVA, V.F.

Synthesis of molybdothoric heteropoly acid. Zhur.neorg.khim. 7 no.7:1752-1753 Jl '62. (MIRA 16:3)

(Molybdothoric acid)

KAMNEVA, A.I.; MUZYCHENKO, L.A.; VAN TSZYAN'-FYN [Wang Chien-fêng]; ZHEMZHUR, A.I.; ZAKHAROVA, V.I.

Oxidation of acenaphthene with electrochemical regeneration of the catalyst. Neftekhimiia 2 no.5:756-759 S-O '62. (MIRA 16:1)

1. Moskovskiy ordena Lenina khimiko-tekhnologicheskiy institut im. D.I.Mendeleyeva, kafedra khimicheskoy tekhnologii topliva.
(Acenaphthene) (Oxidation) (Catalysts)

KAMNEVA, A. I.; ZAKHAROVA, V. I.; MUZYCHENKO, L. A.; ROGOV, V. V.

Preparation of terephthalic acid by the oxidation of p-diacetylbenzene. Neftekhimia 2 no.4:536-540 Jl-Ag '62. (MIRA 15:10)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva.

(Terephthalic acid) (Benzene)

S/204/62/002/004/010/019
E075/E436

AUTHORS: Kamneva, A.I., Zakharova, V.I., Muzychenko, L.A., Rogov, V.V.

TITLE: Preparation of terephthalic acid by the oxidation of p-diacetylbenzene

PERIODICAL: Neftekhimiya, v.2, no.4, 1962, 536-540

TEXT: The authors investigated the oxidation with molecular O of p-diacetylbenzene in glacial acetic acid solution in the presence of manganese acetate (2% wt of p-diacetylbenzene taken). The best yield (65.5%) of terephthalic acid was obtained by conducting the oxidation under 50 atm pressure, 175°C and oxygen feed rate of 1 litre/min. Quantitative analysis of the acetic acid solution containing the oxidation products was carried out by thin film chromatography using Al_2O_3 as the adsorbent and benzene as eluent. It was thus shown that p-diacetylbenzene is almost completely oxidized under the conditions used into terephthalic acid, the latter being partially converted into resinous condensation products. There are 2 figures and 1 table.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D.I.Mendeleyeva (Moscow Institute of Chemical Technology imeni D.I.Mendeleyev)

Card 1/1

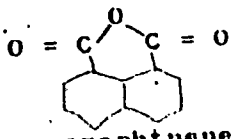
S/204/62/002/005/005/007
E075/E136

AUTHORS: Kamneva, A.I., Muzychenko, L.A., Wang Chien-Fin, Zhemzhur, A.I., and Zakharova, V.I.

TITLE: Oxidation of acenaphtnene with the electrochemical regeneration of catalyst

PERIODICAL: Neftekhimiya, v.2, no.5, 1962, 756-759

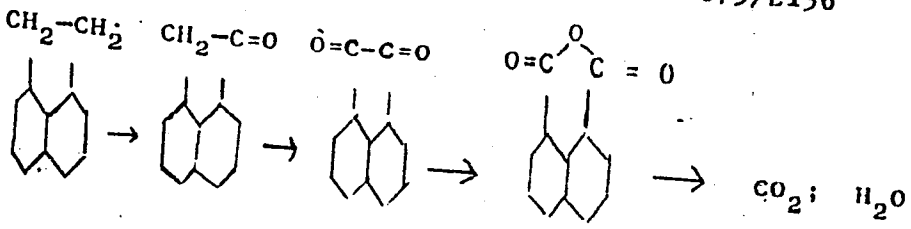
TEXT: The synthesis of



was achieved by oxidizing with O a 10% acenaphtnene solution containing 5% $KCOOCH_3$, 1% $Mn(COOCH_3)_2$, 42% N, N'-dimethyl-formamide and 42% glacial acetic acid at 60 °C for 3 hours. The oxidation proceeded satisfactorily only when the catalyst was regenerated by passing 1.5 A current through the solution. The product melting at 270 °C precipitated out and contained 73% of acidic compounds and some carbonyl compounds. It was postulated that the oxidation proceeds as follows:

Card 1/2

Oxidation of acenaphthene with ... S/204/62/002/005/005/007
E075/E136



There are 2 figures.

ASSOCIATION: MKhTI im. D.I. Mendeleyeva, Kafedra khimicheskoy tekhnologii topliva
(MKhTI imeni D.I. Mendeleyev, Department of Chemical Fuel Technology)

SUBMITTED: May 11, 1962

Card 2/2

ZAKHAROVA, V.K.

Stimulation of phosphorous metabolism in animals by tissue implants. Vop.med. khim. 2 no.4:262-268 Jl-Ag '56. (MLRA 9:10)

1. Otdel biokhimii instituta eksperimental'noy meditsiny AMN SSSR.
(PHOSPHORUS, metabolism,
eff. of tissue prep. according to Filatov's technic implants in animals (Rus))
(TISSUE THERAPY,
eff. of Filatov's tissue implants on phosphorus metab. in animals (Rus))

ZAKHAROVA, V.K.

The distibution of total and lipid phosphorus in organs of animals with experimental tuberculosis under treatment with streptomycin [with summary in English]. Vop.med.khim. 4 no.1:39-42 Ja-F'58 (MIRA 11:5)

1. Kafedra biokhimii Kishinevskogo meditsinskogo instituta.

(TUBERCULOSIS, experimental
phosphorus & phospholipid metab., eff. of streptomycin admin. (Rus))
(PHOSPHORUS, metabolism
distribution in exper. tuberc. eff. of streptomycin admin. (Rus))
(PHOSPHOLIPIDS, metabolism
distribution in exper. tuberc, eff. of streptomycin admin. (Rus))
(STREPTOMYCIN, effects
on phosphorus & phospholipid metab. in exper. tuberc. (Rus))

ACCESSION NR: AR4018332 S/0137/64/000/001/I060/I060

SOURCE: RZh. Metallurgiya, Abs. 1I374

AUTHOR: Konter, L. Ya.; Zakharova, V. L.

TITLE: Studying the influence of "residual influence" of thermomechanical working on the mechanical properties of bearing steel

CITED SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti, no. 1(33), 1963, 16-27

TOPIC TAGS: bearing, bearing steel, roller bearing strength, testing roller bearings, ShKh15 steel, thermomechanical treatment

TRANSLATION: Studies were conducted on ShKh15 steel. Deformation during thermomechanical working took place by means of open rolling, and rolling in a closed band of ring-shaped samples. It was found that after repeated heat treatment (with a short span of heating) of the samples subjected to preliminary thermomechanical working, residue influence of percussion hardening of austenite remains. The residual influence of thermomechanical working during repeated heat treatment occurs not

Card 1/2

L 23304-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) MJW/JD

ACCESSION NR: AR5000600 S/0137/64/000/008/I068/I068

SOURCE: Ref. zh. Metallurgiya. Sv. t., Abs. 8I433

AUTHOR: Konter, L. Ya.; Zalmanova, V. L.

TITLE: Thermomagnetic treatment of bearing steels

CITED SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti, no. 4(36), 1963, 3-10

TOPIC TAGS: bearing, steel, bearing steel, thermomagnetic treatment, magnetic field, austenite, steel ShKh15, steel ShKh15SGSh, steel 9Kh18Sh, steel EI 347Sh, steel R9

TRANSLATION: A study has been made of the effect of thermomagnetic treatment on content of residual austenite, mechanical properties, and contact resistance of bearing steels. Treatment was carried out in an electromagnetic gap with a constant field up to 9500 oersteds, or inside a solenoid with an alternating field up to 200 oersteds. Magnetic tempering was carried out in a tubular electric furnace, placed in an electromagnetic gap or inside a solenoid. The intensity of the constant field during tempering was 5500 oersteds. The amount

Card 1/2

L 23364-65
ACCESSION NR: AR5000600

of residual austenite was determined on a ballistic apparatus. Samples of steels ShKh1[illegible], ShKh15SGSh, 9Kh18Sh, EI347Sh, and R9 were cut from hot rolled annealed rods along the axis of rolling and were polished after heat treatment. The heat treatment and testing method are described. It was established that tempering in a strong constant magnetic field increases bending resistance, a[illegible], and contact resistance of bearing steels. In tempering steels with a constant magnetic field, anisotropy appears in the strength properties: samples tempered in the direction of the magnetic lines of force have better mechanical properties than samples tempered in a direction across the field. The application of a magnetic field in tempering heat resistant steels accelerates the process of decomposition of the residual austenite. 5 figures, 3 tables, 10 literature titles.
T. Luchninova

SUB CODE: MM ENCL: 00

Card 2/2

L 33522-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b)/EWP(l) MJW/JD

ACCESSION NR: AR5005702 S/0276/64/000/010/B057/B057

SOURCE: Ref. zh. Tekhnol. mashinostr. Sv. t., Abs. 10B362

AUTHOR: Konter, L. Ya.; Zakharova, V. L.

TITLE: Thermomagnetic treatment of bearing steels

CITED SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti, no. 4(36), 1963, 3-10

TOPIC TAGS: bearing steel, electromagnetic hardening, constant magnetic field, alternating magnetic field, steel mechanical property, residual austenite, contact endurance, field direction effect/ShKh15 steel, ShKh15SGSh steel, 9Kh18Sh steel, EI347Sh steel, R9 steel

TRANSLATION: This study concerned the effects of thermomagnetic treatment on the content of residual austenite, mechanical properties and contact endurance of bearing steels. Samples were treated in the gap of an electromagnet with a constant field of about 9500 oersteds or inside a solenoid with an alternating field of about 200 oersteds. Magnetic tempering was carried out in a tubular electric furnace placed in the gap of an electromagnet or inside a solenoid. The constant field had an intensity of 6500 oersteds

Card 1/2

L 33522-65

ACCESSION NR: AR5005702

during tempering operations. The amount of residual austenite was determined on a ballistic unit. Samples of ShKh15, ShKh15SGSh, 9Kh18Sh, EI347Sh and R9 steel were cut from hot-rolled and annealed rods along the roll axis and ground after heat treating. The heat treating procedure and experimental methodology are described. It was established that hardening in an intense constant magnetic field improves the impact toughness, bending strength and contact endurance of bearing steels. Anisotropy of strength characteristics was noted when steel was hardened in a constant magnetic field. Samples hardened in the direction of magnetic force lines exhibit better mechanical properties than samples hardened in a direction transverse to the direction of the field. Superposition of a magnetic field when tempering heat resistant steels accelerates the breakdown of residual austenite. Bibl. with 10 titles; 5 illustrations 3 tables.
T. Luchininova

SUB CODE: MM, IE ENCL: 00

Card 2/2

L 31285-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/DJ

ACC NR: AR6009967 SOURCE CODE: UR/0137/65/000/012/I057/I057

AUTHOR: Konter, L. Ya.; Zakharova, V. L.

TITLE: Effect of preliminary work hardening on the rupture strength of hardened bearing steel

SOURCE: Ref. zh. Metallurgiya, Abs. 12I430

REF SOURCE: Tr. Vses. n.-i. konstrukt. tekhnol. in-ta podshipnik. prom-sti, v. 3(39), 1964, 3-9

TOPIC TAGS: bearing steel, rupture strength, metal machining, work hardening

ABSTRACT: Preliminary work hardening causes a change in the initial anisotropy of rupture strength of hardened bearing steel. High-temperature thermomechanical treatment by upsetting increases the brittle rupture strength of hardened bearing steel in the deformation plane. Thermomechanical hardening is partially retained after tempering at 500C and hardening with rapid heating. High-temperature thermomechanical hardening of pellets increases their longevity insignificantly, and is not advisable with existing methods of pressure working and machining for hardened steel. [Translation of abstract]

SUB CODE: 11/ SUBM DATE: none [NT]

Card 1/1 IC

UDC: 669.14.018.27

L 42797-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AR6014353 (A,N) SOURCE CODE: UR/0277/65/000/011/0010/0010

AUTHORS: Konter, L. Ya.; Zakharova, V. L.

TITLE: The influence of preliminary deformation on the resistance to failure in hardened bearing steel

SOURCE: Ref. sh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 11.48.80

REF SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti, no. 3(39), 1964, 3-9

TOPIC TAGS: bearing steel, material failure, bending strength, tensile strength, metal heat treatment, tempering, deformation, mechanical/ ShKh 15SG steel

ABSTRACT: The bending and the tensile strength of steel ShKh 15SG were investigated after high-temperature thermomechanical treatment (HTT) and also after a preliminary cold and hot working and hardening. It was determined that HTT with upsetting increases the resistance of hardened bearing steel to brittle failure in the plane of deformation. The strengthening effect is partially preserved after tempering at 500C followed by hardening with rapid heating. [Translation of abstract]

SUB CODE: 11, 13

Card 1/1

L 05719-67 EWT(m)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/DJ

ACC NR: AR6014354 (A, N) SOURCE CODE: UR/0277/65/000/011/0010/0010

AUTHORS: Konter, L. Ya.; Zakharova, V. L.; Bernshteyn, M. L.; Cher ukha, L. G.

TITLE: An investigation of high-temperature thermomechanical treatment of bearing steel

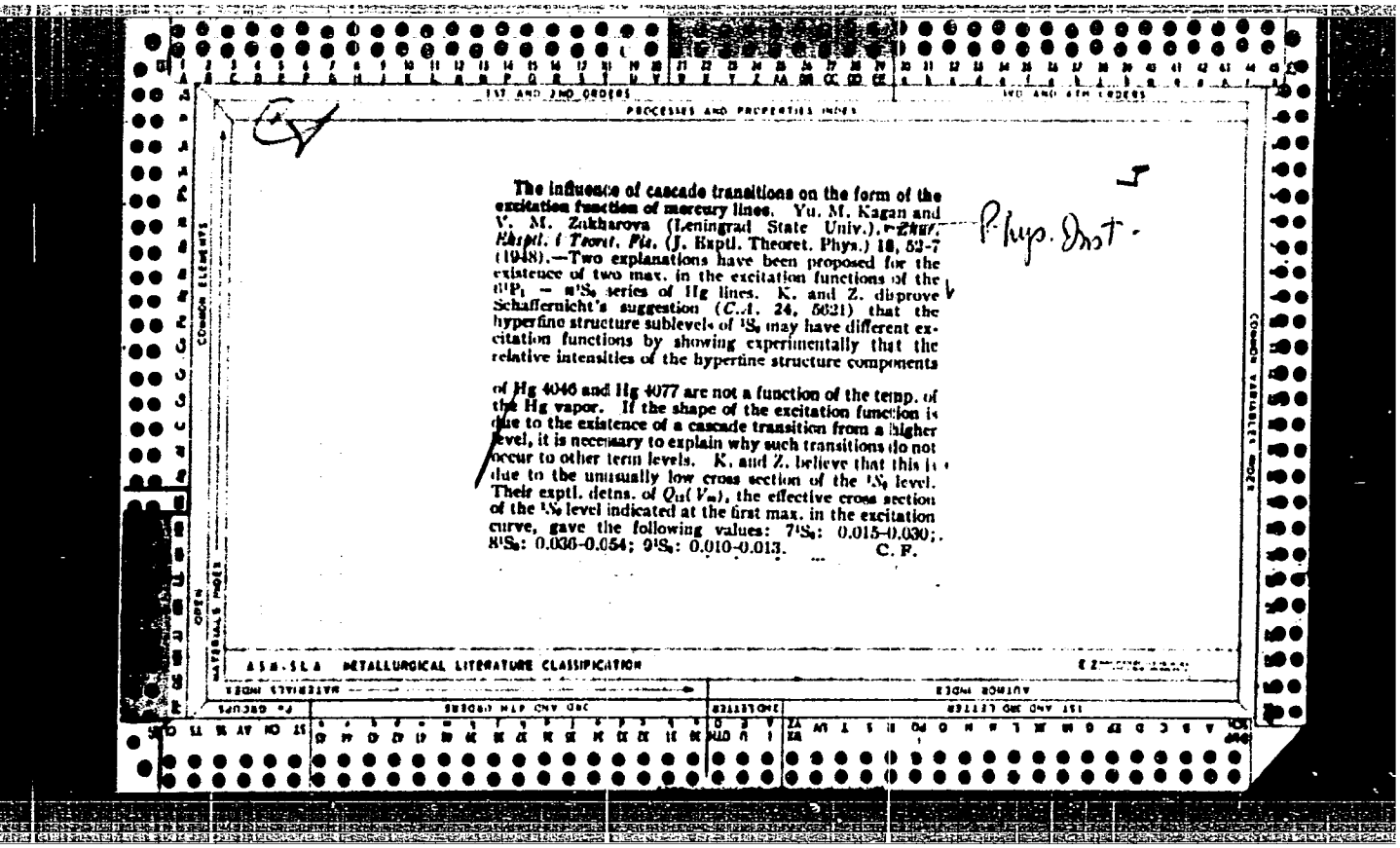
SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 11.48,81

REF SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti, no. 4(40), 1964, 12-24

TOPIC TAGS: bearing steel, metallurgic research, metallurgic process, steel, steel structure / ShKh15 steel

ABSTRACT: The influence of the high-temperature thermomechanical treatment (HTT) on the structure and properties of ShKh15 steel has been investigated. The HTT process involves heating in the interval of 910—1000C, deformation by rolling out to 10—50%, water or oil quenching, and tempering. A control group of specimens was subjected to standard treatment. Applied at optimal conditions, HTT improves several properties of ShKh15 steel. An experimental technique of applying HTT to bearing rings has been developed, and a number of ball bearings and roller bearings has been produced for experimental purposes. 15 illustrations. Bibliography of 6 titles. [Translation of abstract]

Card 1/1 SUB CODE: 11, 13 UDC: 669.14.018.24



PROCESSES AND PROPERTIES INDEX

The influence of cascade transitions on the form of the excitation function of mercury lines. Yu. M. Kagan and V. M. Zukharova (Leningrad State Univ.). *Zhur. Eksptl. i Teoret. Fiz.* (J. Exptl. Theoret. Phys.) **18**, 52-7 (1948).—Two explanations have been proposed for the existence of two max. in the excitation functions of the $^3P_1 - {}^1S_0$ series of Hg lines. K. and Z. disprove Schaffernicht's suggestion (*C.A.* 24, 5621) that the hyperfine structure sublevels of $^1S_0$ may have different excitation functions by showing experimentally that the relative intensities of the hyperfine structure components of Hg 4046 and Hg 4077 are not a function of the temp. of the Hg vapor. If the shape of the excitation function is due to the existence of a cascade transition from a higher level, it is necessary to explain why such transitions do not occur to other term levels. K. and Z. believe that this is due to the unusually low cross section of the $^1S_0$ level. Their exptl. detns. of $Q_{31}(V_m)$, the effective cross section of the $^1S_0$ level indicated at the first max. in the excitation curve, gave the following values: 7^1S_0: 0.015–0.030; 8^1S_0: 0.036–0.054; 9^1S_0: 0.010–0.013. C. F.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ZAKHAROVA, V.M.

Elec (3)
0
2 pp

Chemical Abst.
Vol. 48 No. 4
Feb. 25, 1954
Electronic Phenomena and Spectra

Ion excitation in a low-pressure mercury discharge. Yu. M. Kagan and V. M. Zakharova (Leningrad Univ.). *Zhur. Eksptl. Teoret. Fiz.* 22, 400-6(1952).—A study has been made of the excitation of Hg atoms and ions in the pos. column of a low-pressure Hg discharge. Spectroscopic investigation of the current dependence of the Hg-line intensity confirm the assumption that the fast electrons have a Maxwellian distribution. The excitation of ions results from a direct collision of the atom with an electron. Unsuccessful attempts to displace the spectral lines lead to the conclusion that ions fall freely from their place of origin to the walls of the tube.
J. Turkevich

6-3-54

ZAKHAROVA, V.M.

USSR/ Physics - Electron distribution

Card 1/1 Pub. 43 - 16/97

Authors : Zakharovz, V. M., and Kagan, Yu. M.

Title : Spectroscopic investigation of electron distribution according to the speeds in a positive gas discharge column

Periodical : Izv. AN SSSR, Ser. fiz. 18/2, page 254, Mar-Apr 1954

Abstract : The electron distribution was investigated in a positive discharge column in the presence of sodium - helium vapors at a discharge current intensity of 10 - 90 ma. It is assumed that the spectroscopic method will make it possible to obtain more accurate data on the speed distribution of fast electrons provided the discharge conditions are such that the secondary processes can be disregarded. The difference between the speed of normal electron distribution and the Maxwell distribution is briefly explained. One USSR reference (1941).

Institution : The A. A. Zhdanov State University, Physics Institute, Leningrad

Submitted : .....

ZAKHAROVA, V. M.

ZAKHAROVA, V. M. --"Luminescence of Ions at the Positive Pole of a Gaseous Discharge." Leningrad State U imeni A. A. Zhdanov, Leningrad, 1955 (Dissertation For the Degree of Candidate in Physicomathematical Sciences)

SO: Knizhnaya letopis' No. 37, 10 September 1955

ZAKHAROVA, V. M.

USSR/ Physics

Card 1/1 Pub. 127 - 7/13

Authors : Zakharova, V. M., and Kagan, Yu. M.

Title : Line intensity distribution in secondary series in a positive sodium discharge column

Periodical : Vest. Len. un. Ser. mat. fiz. khim. 10/2, 125-134, Feb 1955

Abstract : The radiation of sodium diffusion series was investigated with respect to the change in discharge parameters to determine the deviations from the Maxwell electron distribution. The dependence of the electron temperature and electron concentration upon pressure and discharge current intensity is explained. The results obtained by measuring the line intensity distribution within secondary series at various pressures and current intensities are tabulated. The harmful effect of the electrophoresis phenomenon, which exists during the discharge in a vapor-inert gas mixture, is discussed. Twenty references: 12 USSR, 3 German, 4 English and 1 Dutch (1930-1954). Graphs.

Institution : .....

Submitted : June 21, 1954

ZAKHAROVA, V.M.

USSR/Physical Chemistry - Atom. B-3

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 46

Author : V.M. Zakharova, Yu.M. Kagan.
Inst : -
Title : Study of Discharge Parameters and Character of Excitation of Ion Lines at Great Current Densities.

Orig Pub : Optika i Spektroskopiya., 1956, 1, No 5, 627-635

Abstract : Sounding and optical measurements were carried out in discharges in Hg vapor (at pressures of $1.2 \cdot 10^{-3}$ to $1.2 \cdot 10^{-1}$ mm of mercury column) and in Ar, Kr and Xe (in the pressure range from 0.2 to 2.0 mm of mercury column) at current densities from 2 to 20 a per sq.cm. The ion part and the beginning of the electron part of the volt-ampere characteristic was used fro the measurement of the ion concentration. The electron concentration n_e, the temperature of the electron gas T_e in inert gases does not change monotonously depending on the current density at gas

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ZAKHAROVA, V.M.

B-3

USSR/Physical Chemistry - Atom.

Abs Jour : Referat Zhur - Khimiya, No 6, 25 March 1957, 18109

Author : Zakharova, V.M.
Title : Contours of Lines of Ions in a Plasma of a Positive Column of a Gas Dischanrge.

Orig Pub : Optika i Spectroskopiya, 1956, 1, No 5, 636-641

Abstract : Contours of lines of ions Ar in a plasma of a positive column of gas discharge are investigated. Discharge tube is 140 mm. long and of a diameter of 4 mm. Gas pressure at the discharge was changing from 0.5 to 2.0 mm. of mercury column; intensity of the discharge current was from 0.2 to 2.2a. Contours of lines were photographed across and along the tube by means of an etalon of Fabry-Perot. The temperature of the ambient medium was maintained with an accuracy of 0.1°. The contours of lines were built by means of a microphotometer MF-2 on the scale of wave lengths. The temperature of ions was determined

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ZAKHARYAN, V.M., inzh.; YARMOVA, N.D., inzh.

Simplified methodology for the conversion of universal electric motors. Elektrotekhnika 35 no.5:49-52 My '64 (MIRA 17:8)

9(4)

AUTHORS: Zakharova, V. M., Kagan, Yu. M. SOV/54-59-3-8/21

TITLE: On Some Characteristics of the Positive Discharge Column at Low Pressures and High Discharge Current Densities

PERIODICAL: Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, 1959, Nr 3, pp 44-48 (USSR)

ABSTRACT: In the introduction the problem mentioned in the title is briefly described and S. E. Frish, Yu. M. Kagan (Refs 1-3), and A. M. Shukhtin (Ref 5) are mentioned in this connection. In the present paper the electric discharge characteristics in a Hg tube on the axis and the walls of the tube at low pressure and high discharge current densities are measured; moreover, an interferometric measurement was made (under the same conditions) of the directed ion velocity as dependent on vapor pressure in the tube. The investigations were made at pressures from 6.10^{-3} to $1.6.10^{-1}$ torr, amperage was 400-1,500 ma which corresponds to a current density of 3.3-11.6 a/cm^2. The temperature of the electron gas T_e and the electron densities n_e

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on the axis and the walls of the tube, the longitudinal field E, and the number of ionizations per electron per unit of time z were determined. Figures 1-4 show the curves of the dependence T_e and n_e on the amperage of the discharge current. The course of these curves on the axis and the walls of the tube is different. The minimum occurring in these curves is considerably weaker on the walls. Concentration n_e increases monotonously with increasing amperage. With rising pressure T_e decreases on the walls, and the concentration increases at all amperages. A complicated relation is observed on the axis. The temperature has a minimum at a certain pressure for all amperages, only at very small amperages it decreases monotonously with rising pressure. At certain pressures n_e has a maximum on the axis. The mentioned processes are explained by a dilution of the gas during the discharge occurring in the central part of the positive column. This is in agreement with the observations made by Shukhtin. Table 1 shows the values computed for z and

the value measured for E. From the measurement of the Doppler shift toward and opposite to the direction of the field the directed velocity of the ions was computed. Table 2 shows the values of $d\lambda$ and $-v_z$. Curve v_z versus steam pressure has a maximum. In conclusion, the authors thank Professor F. E. Frish, Corresponding Member of the AS USSR, for the interest he showed in the work. There are 4 figures, 2 tables, and 9 Soviet references.

SUBMITTED: April 15, 1959

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SOV/48-23-8-14/25

24(3)
AUTHORS: Zakharova, V. M., Kagan, Yu. M., Perel', V. I.

TITLE: The Positive Column of Discharge in the Diffusion Procedure

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 8, pp 999-1003 (USSR)

ABSTRACT: In the introduction of the present paper some older articles of non-Russian scientists on the positive discharge column at low pressures are mentioned in addition to articles published by B. N. Klyarfel'd. An equation for the balance of electrons and ions (1) introduced by L. Frost is given, This article intends to obtain some relations by Frost's theory for a comparison with experiments, and to apply the comparison to the positive column of Hg, Ar, and K. In the first part, the drift velocity (2) is given by Frost's approximation, besides the approximation for potential distribution and concentration (4). By means of the latter the balance equation (7), a formula for the number of ions per unit of length of the column, and a formula for the ion current density (9) are developed. In the second part, experiments of Langmuir and Tonks (Ref 2) are referred to, and the equations (11) for the plasma boundaries

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The Positive Column of Discharge in the Diffusion Procedure

are given. Formulas (12) deliver the drift velocity and ionic concentration near the plasma boundary, equation (13) gives the average velocity of ions. An approximate formula (16) is given for calculating the thickness of the layer. Equation (17) supplies the potential difference between axis and wall of the tube. In the third part, the calculated results are compared to experimental results. The temperature of the electron gas was determined by means of a search electrode, the electron density was found by formula (18). The charges measured in Hg-, Ar-, and K-vapor are summarized in the diagrams of figures 1 to 3, and it was found that there is good agreement with theoretical values as long as diffusion procedure may be assumed. There are 3 figures and 13 references 5 of which are Soviet.

24(4),24(7) SOV/53-69-1-10/11

AUTHORS: Bogdanova, I. P., Bochkova, O. P., Zaydel', A. N., Zakharova, V. M., Kagan, Yu. M., Kalitseyevskiy, N. I., Penkin, N. P., Chayka, M. P., Shukhtin, A. M., Lipis, L. V.

TITLE: Sergey Eduardovich Frish (Sergey Eduardovich Frish). On the Occasion of His Sixtieth Birthday (k shestidesyatiletiyu so dnya rozhdeniya)

PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol 69, Nr 1, pp 165-167 (USSR)

ABSTRACT: On June 19th, 1959, the well-known Soviet physicist S. E. Frish, who made a name for himself especially in the field of spectroscopic optics, attained the age of sixty. He began his scientific work as a student at the fiziko-matematicheskoye otdeleniye Leningradskogo universiteta (Physico-mathematical Department of Leningrad University) under D. S. Rozhdestvenskiy. After completing his university studies he continued his work at the Gosudarstvennyy Opticheskiy institut (Optical State Institute). Since 1934 he held a chair for optics and supervised work at the Physics Department, first as dean and later as director of the Nauchno-issledovatel'skiy fizicheskiy institut LGU (Scientific Research Institute for Physics at Leningrad

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Sergey Eduardovich Frish.
On the Occasion of His Sixtieth Birthday

State University). In 1946 he was appointed Corresponding Member, AS USSR, and took active part in the work of the Academy. He is deputy chairman of the spectroscopy Committee, chief editor of the periodical "Optika i spektroskopiya" and member of the International Committee for spectroscopy at the UNESCO. He first concentrated his scientific interest on atomic energy, the systematics of atomic spectra, the Zeeman effect in the sodium and potassium spectrum, as well as upon experimental spectroanalytical investigations. In 1930 he started a cycle of works, which was devoted to optical methods of investigating the properties of the atomic nucleus. (An investigation of the interaction between nucleus and electron shell led to the discovery of the hyperfine structure of spectra). He investigated the hyperfine structure of Na and set up a rule concerning the interrelation between nucleus-spin- and parity. He further investigated the fine structure of isotope mixtures, the excitation mechanism of the higher atomic levels, and questions of the interaction of elementary

Sergey Eduardovich Frish.
On the Occasion of His Sixtieth Birthday

SOV/53-69-1-10/11

particles. Finally, mention is made of his pedagogical activities, especially his courses in physics (which are partly held together with A. V. Timoreva). There are 1 figure and 42 Soviet references.

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S/057/60/030/04/07/009
B004/3002

AUTHORS: Zakharova, V. M., Kagan, Yu. M., Mustafin, K. S., Perel', V. I.

TITLE: Probe Measuring Under Middle Pressures

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 4, pp. 442-449

TEXT: It was the purpose of the present paper to investigate the applicability of the Langmuir probe for measuring the characteristic plasma values at pressures higher than 1 torr. The authors derived equations (4), (5) for the ion currents directed upon spherical and cylindrical probes with strong negative charges, and their current densities (equations 8-10). Furthermore, equation (11) is given for the plasma potential V_o. The following method of measuring the characteristic plasma values is suggested: a) the electron temperature T_e is determined by means of the two-probe method given in Ref. 11; b) the electron concentrations are determined by means of equations (4), (5) and by applying the electron section of the characteristics. The effective cross

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sections of the ion overcharge, gas temperature, and concentration of the normal atoms must be known for the determination of the ion concentration n_∞. The theoretical calculations are experimentally proven in Hg vapor at 10^{-1} to 1 torr. Table 1 shows that the values n_∞ of spherical and cylindrical probes are in good agreement with calculations. Furthermore, plasma measurements were carried out in neon and argon at 1 to 20 torr, 50, 200, and 400 ma, and in Hg at 10 torr, 0.5, 1.0, 1.5, and 2.0 a. Table 2 gives the field voltages of Ne and Ar, Table 3 the values of T_e, Table 4 the density of the ion current, and Table 5 the values of n_∞. The T_e values were taken according to Ref. 14 and measurements by O. P. Bochkova. The dependence of the electron concentration distribution on pressure in the case of Ne and Ar, is given in Figs. 1 and 2. These Figs. show that a pressure increase is accompanied by a compression along the axis, and differs for Ne and Ar. The column contraction observed, and the difference between calculated and measured wall current related thereto, indicate that the Schottky theory no longer holds true for the pressures applied. The authors finally investigate the

Probe Measuring Under Middle Pressures

S/057/60/030/04/07/009
B004/B002

possible effect of electron- and photon emission on the result of their method, and prove this effect to be very low. They mention a paper by N. P. Penkin, and thank Professor S. E. Frish for the interest he took in this paper. There are 2 figures, 5 tables, and 16 references: 10 Soviet, 3 American, 1 British, and 1 Japanese.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: July 16, 1959

/B

Card 3/3

ZAKHAROVA, V.M.; KAGAN, Yu.M.

Spectroscopic determination of ion mobility in a mixture of inert gases. Opt. i spektr. 10 no.4:547-549 Ap '61. (MIRA 14:3)

(Ions—Migration and velocity)

32528
S/051/61/011/006/011/012
E039/E385

24.7120

AUTHORS: Zakharova, V.M., Kagan, Yu.M. and Perel', V.I.

TITLE: Spectroscopic observation of the rotation of a positive column discharge in a magnetic field

PERIODICAL: Optika i spektroskopiya, v.11, no.6, 1961, 777-779

TEXT: It has been shown that, in powerful arc discharges at low pressures in a magnetic field, the ions rotate about the axis of the arc. This azimuthal motion is explained as the effect of the action of the magnetic field on a radial current of ions. In this work an argon discharge was studied in a tube 1.5 cm in diameter and 180 cm long. The pressure range covered was 0.5 to 2.5 mm Hg. The discharge current was 1.6 A and the magnetic fields used were 250, 600 and 1 000 Oe. Two solenoids 60 cm long were placed on the centre of the tube with a space of 1.5 cm for the spectroscopic observations. The speed of rotation of the atoms was measured by observing the displacement of the 4 300 and 4·044 Å lines using a specially designed spectrograph and a Fabry-Perot etalon. It was shown that the direction of the rotation of the atoms was the same as for the positive ions and

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Spectroscopic observation ....

that the speed of rotation depended on the strength of the magnetic field and the gas pressure. The maximum value observed was 1.5×10^4 cm/sec at a pressure of 1 mm Hg and a field of 600 Oe. At fields of 250 and 1 000 Oe the speeds of rotation were 0.3 and 0.4×10^4 cm/sec, respectively.

There are 1 figure and 9 references: 3 Soviet-bloc and 6 non-Soviet-bloc. The four latest English-language references mentioned are: Ref. 3: J.M. Wilcox - Rev. Mod.Phys., 31, 1045, 1959; Ref. 7: A. Simon. Proc. of the II United Nation Conference of the Peaceful Uses of Atomic Energy, 32, 343, 1958; Ref. 8: B. Kadomzev, A. Nedospacov - J nucl. energy, C 1, 230, 1960; Ref. 9: T. Hoh, B. Lehnert. Phys. of fluids, 3, no. 4, 1960.

SUBMITTED: June 21, 1961

Card 2/2

X

L 2134-65 EWT(l)/EWG(k)/EWT(m)/EPA(sp)-2/EPF(c)/EPF(n)-2/EPR/EPA(w)-2/
EEC(t)/T/EEC(b)-2/EWP(q)/EWP(b)/EWA(m)-2 Pz-6/Po-4/Pab-24/Pr-4/Ps-4/Pi-4/Pu-4
IJP(c)/ESD/ASD(a)-5/ESD(gs)/ESD(t) JD/AT
ACCESSION NR: AP4044842 S/0051/64/017/003/0333/0336

148

AUTHOR: Golubovskiy, Yu. B.; Zakharova, V. M.; Kagan, Yu. M.

TITLE: Investigation of ion and atom line contours in the positive column of a discharge in argon 21

SOURCE: Optika i spektroskopiya, v. 17, no. 3, 1964, 333-336

TOPIC TAGS: argon plasma, spectrum line, discharge column, ion temperature, plasma ion motion, plasma atom

ABSTRACT: Unlike the earlier investigations (Kagan and Zakharova, ZhETF v. 22, 400, 1952), which were made at pressures $p > 0.5$ mm Hg and at large current densities (as high as 55 A/cm^2), the present investigation was made at low pressures (10^{-2}--5 x 10^{-1} mm Hg) and at current densities 0.3 A/cm^2. The discharge tube and the set-up for recording the contour are described. The tests yielded the atom and ion temperatures and the directional component of the ion velocity in

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L 2134-65
ACCESSION NR: AP4044842

the discharge. The experimental data are compared with the theoretically calculated values of the same quantities and confirm the previously proposed mechanism for the motion of ions in a plasma. According to this mechanism, the ions are accelerated at low pressures in the longitudinal field for a time limited by their drift to the wall. With increasing pressure, the drift to the wall slows down and the directional velocity and energy of the ions increases. Further increase in the pressure causes the ion acceleration to be governed by the collisions, so that the directional velocity drops again. Orig. art. has: 3 figures, 6 formulas, and 3 tables.

ASSOCIATION: None

SUBMITTED: 12Nov63 ENCL: 02

SUB CODE: ME NR REF SOV: 007 OTHER: 000

Card 2/4

L 2134-65
ACCESSION NR: AP4044842

ENCLOSURE: 01

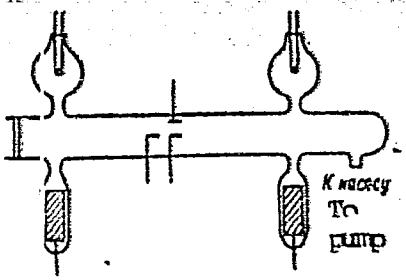

Fig. 1. Discharge tube

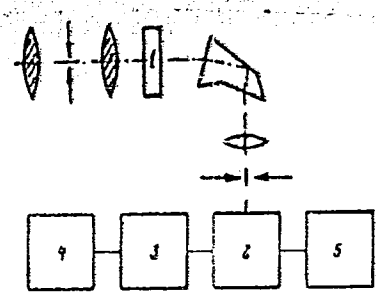

Fig. 2. Contour recorder

1- Fabry-Perot etalon, 2 - photomultiplier, 3 - dc amplifier, 4 - automatic recorder, 5 - voltage stabilizer

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ENCLOSURE: 02

Table 1

P, mm.Hg	$n_e \cdot 10^{-11}$	$\frac{1}{T_e} \cdot 10^{-4}$	Ω	ε
10^{-2}	0.6	3.4	0.5	1.63
$5 \cdot 10^{-2}$	0.9	2.8	1.5	1.85
10^{-1}	2.7	2.6	1.3	1.05
$5 \cdot 10^{-1}$	3.6	1.5	0.9	1.85

Plasma parameters

Ra Table 2

P, mm.Hg	T	T_p exp,	T_p theor
10^{-2}	350	570	400
$5 \cdot 10^{-2}$	350	750	540
10^{-1}	350	700	400

Atom and ion temperatures

Table 3

v	P, mm.Hg			
	10^{-2}	$5 \cdot 10^{-2}$	10^{-1}	$5 \cdot 10^{-1}$
v_{exp}	4.0	10.0	10.0	5.0
v_{theor}	13.0	27.0	18.0	3.0

Ion directional velocities

Card 4/4

L 4385-66 EWT(l)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2 IJP(c) AT
ACC NR: AP5017907 UR/0051/65/019/001/0140/0141
537.523.527

AUTHOR: Zakharova, V. M.; Kagan, Yu. M.

TITLE: Concerning the rotation of the positive column of a discharge in a magnetic field

SOURCE: Optika i spektroskopiya, v. 19, no. 1, 1965, 140-141

TOPIC TAGS: neon, argon, helium, krypton, gas discharge plasma, turbulent plasma, pressure effect, plasma magnetic field

ABSTRACT: This is a continuation of earlier work (Opt. i spektr. v. 11, 77, 1961) in which the rotation of the positive column of argon discharge in a longitudinal magnetic field was observed by a spectroscopic method. In the present work, the speed of rotation of the plasma in helium, neon, argon, and krypton was investigated in the pressure range between 0.5 and 2.5 mm Hg, for a discharge current 600 ma in magnetic fields from 50 to 1000 Oe. The method of observation was improved by substituting photoelectric recording for photography. A discharge tube 2.2 cm in diameter was used. The pressure in the chamber could be varied linearly. The image of the edge of the positive column was projected on the slit of a 2PS spectrograph crossed with a Fabry-Perot etalon 30 mm thick. The image of the slit and of the interference pattern was projected on the spectrograph camera lens, and part of the central-ring image was cut out by mutually perpendicular slits and projected on the photomultiplier (FEU 51).

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ACC NR: AP5017907

3

The study showed that the speed or rotation of the plasma increased with increasing current in all gases and decreased with increasing pressure. Measurements made with various lines in different gases gave similar results. All plots of the speed of rotation against the magnetic field exhibited maxima at approximately 150, 300, 600, and 800 Oe for helium, neon, argon, and krypton, respectively. It is shown that the rotation cannot be attributed to transfer of momentum to the atoms from the electrons and ions. "The authors thank V. I. Perel' for a discussion of the results of this work." Orig. art. has: 2 figures. 44,55

ASSOCIATION: None

SUBMITTED: 24Dec64 ENCL: 00 SUB CODE: ME

NR REF SOV: 002 OTHER: 000

Card 2/2

ZAKHAROVA, V. N.

"The Telephone Set TAU-1 MB"

Vestnik Svyazi, No 4, 1952, pp 7-8

Translation M-1340, 10 Dec 56

RAZUVAYEV, G.A.; GRAYEVSKIY, A.I.; MINSKER, K.S.; ZAKHAROVA, V.N.

Synthesis and some properties of diethoxyaluminum peroxycumal. Izv.AN SSSR.Otd.khim.nauk no.9:1555-1559 S '62. (MIRA 15:10)

1. Nauchno-issledovatel'skiy institut khimii, g. Gor'kiy.
(Aluminum organic compounds)

S/062/62/000/009/003/009
B179/B101

AUTHORS: Razuvayev, G. A., Grayevskiy, A. I., Minsker, K. S., and Zakharova, V. N.

TITLE: Synthesis and some properties of diethoxy aluminum peroxy cumene

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 9, 1962, 1555 - 1559

TEXT: It is sought to synthesize stable aluminum organic peroxide compounds free from impurities. Three syntheses were studied: (1) the reaction of diethoxy ethyl aluminum with cumene hydrogen peroxide, (2) that of triethoxy aluminum with cumene hydrogen peroxide, and (3) that of diethoxy aluminum chloride with the Na-salt of cumene hydrogen peroxide. Reaction (1) takes place only at temperatures higher than 15 - 20°C and in practice is not completed. Reaction (2), occurring at a maximum temperature of 28 - 30°C likewise does not complete its course and the reaction mixture contains no compound with an R-Al bond. Best results were obtained for the reaction

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B179/B101

Synthesis and some properties...

$$Cl\text{-}Al(OC_2H_5)_2 + Na\text{-}O\text{-}O\text{-}C_9H_{11} \rightarrow \left[\begin{array}{l} Cl\text{-}Al(OC_2H_5)_2 \\ \quad | \\ Na\text{-}\overline{O}| \\ \quad | \\ |\underline{O}\text{-}C_9H_{11} \end{array}\right] \rightarrow NaCl + \begin{array}{l} Al(OC_2H_5)_2\cdot \\ | \\ |\underline{O}\text{-}\underline{O}\text{-}C_9H_{11} \end{array}$$

This took place at 5°C in xylene solution. NaCl precipitated as fine crystals, the surplus aluminum alcoholates were evaporated and the peroxide was extracted with ether. Sometimes an amorphous complex compound having the composition $AlCl(OC_2H_5)_2\cdot NaOOC_9H_{11}$ was precipitated with the NaCl. The peroxide $C(C_2H_5O_2)AlOOC(CH_3)_2\cdot C_6H_5$ is a solid, white, amorphous substance which melts and decomposes at 113°C; it is easily soluble in xylene, benzene and chloroform. Its solution in xylene decomposes appreciably fast even at room temperature. At 90°C the decomposition is energetic. Its products are dimethyl-phenyl carbinol, acetophenone, α-methyl styrene, ethyl alcohol and aluminum hydroxide. The polymerization of methyl methacrylate, styrene, acrylonitrile, vinylidene chloride and vinyl chloride using $(C_2H_5O)_2AlOOC(CH_3)_2\cdot C_6H_5$ as radical catalyst, gave a good yield of polymers. In the case of vinyl chloride, the yield of polymer

Card 2/3

increased with increasing content of peroxide in the reaction medium. The polyvinyl chloride (decomposition temperature up to 150°C, thermostability 6 - 7 min) was amorphous and insoluble in either cyclohexanone or dichloro ethane, owing to strongly branched or net-like structure. There are 1 figure and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii, Gor'kiy (Scientific Research Institute of Chemistry, Gor'kiy)

SUBMITTED: March 1, 1962

ZIKEYEV, I. . (Gor'kiy); ZAKHAROVA, V.P. (Gor'kiy)

Improve the planning of the operational work of the railroads. Zhel. dor.transp. 46 no.9:13-16 S '64. (MIRA 17:10)

1. Nachal'nik Gor'kovskoy dorogi (for Zikeyev). 2. Nachal'nik planovo-ekonomicheskogo otdela Gor'kovskoy dorogi (for Zakharova).

ACCESSION NR: AP5008593

AUTHOR: Zakharyuta, V. P.; Simonenko, I. B.; Fedorich, V. I.

TITLE: Calculation of capacitances by the point discharge method

ABSTRACT: An approximate method of calculating the capacitance of conductors [illegible] is particularly effective when [illegible] is determinable for a [illegible] problems. The new method is [illegible]

SUB CODE: EE

JPRS

ZAKHAROVA, V. P.

PA 41/49T95

USSR/Nuclear Physics - Cosmic Radiation Apr 49
Nuclear Physics - Geiger Counters

"Study of the Density Spectrum of Wide, Very Dense Atmospheric Showers," V. P. Zakharova, L. Kh. Kytun, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 3 pp

"Dok Ak Nauk SSSR" Vol LXV, No 4

Results of further measurements of the density spectrum of wide atmospheric showers in the region of very great densities (up to 5,000 particles per sq m). Arrangement of Geiger counters used registered three- and six-repeated discharge

41/49T95

USSR/Nuclear Physics - Cosmic Radiation (Contd) Apr 49

coincidences in self-quenching counters, and was placed in a horizontal plane around a circle with a 1.5-meter diameter at a distance of 0.5 meter from the lightweight roof of the plywood box (approximately 0.5 g/sq cm). Submitted by Acad D. V. Skobel'tsyn, 31 Jan 49.

41/49T95

G. T. Zatspein, I. L. Rosenthal, V. P. Zakharova, N. G. Khrebet, and G. B. Khristianson

The Observations of Atmospheric Showers of Cosmic Rays Having a Width Over 1000 Metors.

Academy of Sci, USSR, New Series, Moscow
Vol. 74, No. 1, September 1950, pp. 29-33

From: Monthly List of Russian Accessions
October 1950, Vol. 3, No. 7, p. 38

Zakharova, V.P.

1st Conf.

Measurements of the average number of neutrons emitted in the fission of several uranium and plutonium isotopes. I. Measurement of the average number of neutrons released upon fission of uranium-233, uranium-235, plutonium-239, and plutonium-241. V. I. Kalashnikova, V. P. Zakharova, V. I. Lebedev, L. A. Mikaelyan, and P. E. Spivak. *Conf. Acad. Sci. U.S.S.R. on Peaceful Uses of Atomic Energy, Session Div. Phys. Math. Sci.* 1955, 123–6 (Pub. 1956) (Engl. translation). II. Number of neutrons generated at the fission of heavy nuclei as a function of the excitation energy of the fissionable nucleus. V. I. Kalashnikova, V. P. Zakharova, A. V. Krasnushkin, V. I. Lebedev, and M. I. Pevzner. *Ibid.* 127–30. III. Estimation of the average number of neutrons which are released at the fission of various isotopes of uranium and plutonium. V. I. Kalashnikova, V. P. Zakharova, V. I. Lebedev, and P. E. Spivak. *Ibid.* 131–2.—See *C.A.* 50, 3113e. B. M. R.

Physics Inst. im Lebedev, AS USSR

21 (8)

AUTHORS: Apalin, V. F., Dobrynin, Yu. P. (Deceased), Zakharova, V. P., Kutikov, I. Ye., Mikaelyan, L. A.

SOV/89-7-4-11/28

TITLE: The Mean Number of Neutrons Emitted by U^{235} in Triple Fission

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 4, pp 375-376 (USSR)

ABSTRACT: The triple fission of heavy nuclei with emission of α-particles is a very rare and comparatively little investigated phenomenon. The α-particle spectrum is then continuous, has a broad maximum at an energy of about 15 Mev, and extends up to 28 Mev. The α-particles are essentially emitted in a direction that is perpendicular to that of the departure of the fragments. Some clearness might be obtained with respect to the initial stages of fission processes by investigating triple fission. It is interesting that the boundary of the energy spectrum of α-particles (28 Mev) is noticeably higher than the value that might be furnished by the forces of Coulomb repulsion of the uranium nucleus. According to the authors' opinion, investigation of the characteristics of triple fission as a function of the ratio of the fragment masses and investigation of the energy balance is of great interest. The quantity of neutrons

flying away in fission is a measure for the excitation of the fragments. The authors therefore determined the average number ν of neutrons emitted in a triple fission of the compound nucleus U^{236}. The investigation was carried out on an electron beam of a VVR-reactor. A U^{235} layer of 0.7 mg/cm^2 thickness was applied to the central electrode of the double ionization chamber. Counting the fission fragments is briefly described. The mean lifetime of the neutrons in the scintillator was 11 microseconds. A total of 5,000 cases of triple fission was recorded. The average number of neutrons per triple fission is 1.77 ± 0.09. If the thickness of the aluminum filter amounts to 35 μ, the system recorded triple fissions in which α-particles with an energy of more than 9 Mev fly off. The authors deemed it to be of essential importance to clear up the connection between ν and α-particle energy. This dependence was measured by means of an aluminum filter of 135 μ thickness. The apparatus recorded only such cases of triple fission in which α-particles with an energy of more than $\sim$ 22 Mev were emitted. The counting rate amounted to 40 coincidences per hour.